Abstracts

On the computation of the complete spectral Green's dyadic for layered bianisotropic structures

This paper shows how to obtain a systematic algorithm for computing the complete spectral Green's dyadic (CSGD) of multilayered bianisotropic planar structures. The top and bottom boundary conditions of the structures can be either electric/magnetic walls or any kind of boundary condition suitable for implementation by means of impedance/admittance dyadics. The method presented here makes use of the fact that the sheets of normally directed surface electric-/magnetic-current density can be transformed into equivalent sheets of transverse electric-/magnetic-current density. Once the problem has been reduced to deal only with transverse current densities, the equivalent boundary method (EBM) is extended to obtain the CSGD. This method has been applied to compute the radiation characteristics of arbitrarily oriented dipoles embedded in different layered structures.

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